

## **STATUS OF CLAIMS**

Claims 48-69 are pending in this application, claims 1-47 have been cancelled previously. Claims 48 and 66 are the independent claims.

## **REMARKS**

### **Objections**

The objection to claim 66 has been obviated by the amendment above.

### **Nonstatutory Obviousness-Type Double Patenting Rejections**

Claims 48-69 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over U.S. Patent No. 6,696,667. A Terminal Disclaimer will be filed upon the indication of allowable subject matter.

### **Rejection of Claims 48-69 Under 35 U.S.C. §103(a)**

Claims 48-65 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shapovalov et al. (U.S. Patent No. 6,563,080) in view of Hella et al. (U.S. Patent No. 4,456,811) and Freedenburg et al. (U.S. Patent No. 5,620,618). In addition, claims 48-65 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's alleged admitted prior art (AAPA) in view of Hella et al. and Freedenburg et al. These rejections are hereby traversed for the following reasons.

As the Examiner recognizes, neither Shapovalov et al. or Freedenburg et al. show a conical mirror having an apex with an aperture therethrough that is traversed by the workpiece. The Examiner asserts that this claimed feature is shown in Hella.

The Examiner states in the Final Action that it would have been obvious to modify Shapovalov "so that the stent or workpiece can be moved relative to the laser beam by passing through the aperture of the conical mirror, thereby allowing holes of uniform diameter to be cut along the circumferential outer surface of the said workpiece." Applicants fail to understand the reasoning behind this purported motivation that is being offered. Clearly, Shapovalov already has the capability to form such uniform diameter holes by rotating the workpiece, as Shapovalov suggests at column 5, lines 44-46. What does the provision of the conical mirror as suggested by Hella accomplish that

Shapovalov cannot accomplish on its own? Is there any benefit or advantage that arises from the proposed combination? If so, the Examiner has not pointed to such a benefit or advantage. Accordingly, the purported motivation supplied in the Final Action appears to be nothing more than conjecture.

As the Supreme Court has recently stated in *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007), “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness.” In light of KSR the USPTO has published “Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme court Decision in *KSR International Co. v. Teleflex Inc.*”(OG Notices: November 6, 2007) (“The Examination Guidelines”). One such rationale noted in the Examination Guidelines for supporting a legal conclusion of obviousness is based on a finding of some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. However, regardless of the route taken in developing such a rationale, all obviousness determinations must be backed by solid evidence.

In accordance with the Examination Guidelines, the Examiner has supplied motivation as a rationale by stating that one of ordinary skill would have been motivated to modify Shapovalov in order to allow holes of uniform diameter to be cut along the workpiece's circumference. As noted above, the evidence supporting this rationale is completely lacking. As stated in MPEP 2144, “The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination.” *In re Sernaker*, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983). See also *Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick*, 464 F.3d 1356, 1368, 80 USPQ2d 1641, 1651 (Fed. Cir. 2006) (“Indeed, we have repeatedly held that an implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the 'improvement' is technology-independent and the combination of references results in a product or process that is more desirable, for

example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient.").

In the present case, nothing in the references suggests that holes with a more uniform diameter can be formed using the teachings of Hella than Shapovalov can achieve on its own. Accordingly, the Examiner has not provided a convincing line of reasoning that some advantage or expected beneficial result would have been produced by the proposed combination of references. Rather, only with the improper use of hindsight is there any reason to combine Shapovalov with Freedenberg and Hella in the manner proposed by the Examiner. Such improper use of hindsight has been repeatedly prohibited by the Federal Circuit, as noted in MPEP 706.02(j) ("The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

For at least the above reasons, it is respectfully requested that the rejection of independent claim 48 and the claims that depend therefrom under 35 U.S.C. §103(a) as being unpatentable over Shapovalov in view of Hella et al. and Freedenburg be reconsidered and withdrawn.

In rejecting claims 48-65 under 35 U.S.C. §103(a) as being unpatentable over Applicant's AAPA in view of Hella and Freedenburg et al, the Examiner offers the same line of reasoning to combine the AAPA with Hella as offered in combining Shapovalov with Hella. This rationale is accordingly deficient for the same reasons presented above in which Applicant asserts that the motivation offered to combine Shapovalov with Hella is insufficient to render the claims obvious. Accordingly, for at least this reason, it is respectfully requested that the rejection of independent claim 48 and the claims that depend therefrom under 35 U.S.C. §103(a) as being unpatentable over Applicant's AAPA in view of Hella and Freedenburg be reconsidered and withdrawn.

**Rejection of Claims 66-68 Under 35 U.S.C. §102(b) and Claim 69 under §103(a)**

Claims 66-68 stand rejected under 35 U.S.C. §102(b) as being anticipated by Shapovalov. In addition, claim 69 stands rejected under 35 U.S.C. §103(a) as being

unpatentable over Shapovalov in view of Hella et al. and Freedenburg et al. These rejections are hereby traversed for the following reasons.

The Examiner asserts on page 7 of the Final Action that Shapovalov teaches redirecting the beam generated by the stationary source so that it is scanned about a circumference of the tubular workpiece without rotation of the workpiece. Applicant respectfully disagrees.

The Examiner points to column 3, lines 29-40 and column 7, lines 46-57 of the reference in support of this assertion. Column 3, lines 29-40 of Shapovalov states in full:

The invention is also directed to an image processing head for use with a laser. The head comprises a housing having a first opening therein for an input laser beam and a second opening therein for an output laser beam, a first mirror located within the housing, a second mirror located within the housing, a third mirror located within the housing and an optical path extender located within the housing. The first mirror redirects the input laser beam into the optical path extender. The second mirror redirects the laser beam from the optical path extender to the third mirror and the third mirror redirects the laser beam through the second opening in the housing.

Applicant fails to see anything in the cited passage that suggests that the beam can be scanned about the circumference of the workpiece without rotation of the workpiece. The language cited at Column 7, lines 46-57 of Shapovalov is similar to that quoted above. Once again, Applicant fails to see anything in this cited passage suggesting that the beam can be scanned about the circumference of the workpiece without rotation of the workpiece.

Indeed, nothing in Shapovalov appears to suggest that the beam can be scanned about the circumference of the workpiece unless the workpiece is rotated. The optical path extender pointed to by the Examiner (defined by mirrors 214 and 212 in FIG. 5) simply conditions the optical beam before the beam is directed onto the workpiece. (It should be noted that the Applicant fails to see any pivoted scanning mirrors to which the Examiner refers on page 7 of the Final Action. As best as Applicant can discern, all the mirrors shown in the reference appear to be stationary). As should be evident from FIG. 5 there is no apparent way that the optical beam emitted by nozzle 45 onto the workpiece

247 can be scanned about the workpiece's circumference without rotation of the workpiece. If the Examiner continues to maintain that the arrangement in Shapovalov has such a capability, Applicant would appreciate it if the Examiner would elaborate on how this capability is achieved.

For at least the above reason, it is respectfully requested that the rejection of independent claim 66 and the claims that depend therefrom under 35 U.S.C. §102(b) as being anticipated by Shapovalov should be reconsidered and withdrawn. The rejection of claim dependent 69 under 35 U.S.C. §103(a) should also be reconsidered and withdrawn since claim 69 depends from and further defines the invention of claim 66.

**Rejection of Claims 66-69 Under 35 U.S.C. §103(a)**

Claims 66-69 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's alleged admitted prior art (AAPA) in view of Freedenburg et al. This rejection is hereby traversed for the following reasons.

The Examiner recognizes that the AAPA does not show the claimed step of *redirecting the radiation beam generated by the stationary radiation source so that it is scanned about a circumference of the tubular workpiece without rotation of the tubular workpiece*. The Examiner asserts, however, that this feature of claim 66 is shown in Freedenberg and that it would have been obvious to combine the teaching of the AAPA and Freedenberg to obtain the claimed invention. Applicant respectfully disagrees.

The Examiner points to the scanning galvanometer shown in FIGs. 5(a) and 5(b) of Freedenburg as allowing "the laser beam to be redirected and thereby enable the circumferential surface of the workpiece to be scanned." (see page 19 of the Final Action) This assertion is believed to be incorrect. As discussed in the portion of the reference cited by the Examiner (column 10, lines 11-28), Freedenburg shows a Post-Objective Scanner 59 that directs the laser beam onto a flat workpiece or part 12. The laser beam is then scanned over the part 12 along a path 51. Path 51 is located in the plane of the part 12 (the x-y plane as shown). Although path 51 is curved away from the straight line 52, both the path 51 and line 52 lie in a common plane. Accordingly, the Post-Objective Scanner 59 simply scans a laser beam within a plane on the flat part 12. Nothing in the cited passage suggests that Freedenburg could scan about a

circumferential workpiece instead of scanning in a plane. Likewise, the remaining passage of the reference cited by the Examiner, column 11, lines 10-15 and 59-67, simply refers to a Mid-Objective Scanner that is used to obtain a flat image or line 75 at the surface of the workpiece 12 shown in FIG. 8.

Accordingly, for at least the above reasons, it is respectfully requested that the rejection of claim 66 and the claims that depend therefrom under 35 U.S.C. §103(a) as being unpatentable over Applicant's AAPA in view of Freedenburg be reconsidered and withdrawn.

### **Conclusion**

In view of the foregoing, it is believed that the application is now in condition for allowance, and early passage of this case to issue is respectfully requested. If the Examiner believes there are still unresolved issues, a telephone call to the undersigned would be welcomed.

Respectfully submitted,

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